Algebra (percentages)

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

**Percent**

**Write each percent as a fraction in simplest form.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 1. | 41% | | |  |  | | --- | --- | | 2. | 980% | | |  |  | | --- | --- | | 3. | 50% | |

**Write each percent as a decimal.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 4. | 19% | | |  |  | | --- | --- | | 5. | 84.8% | | |  |  | | --- | --- | | 6. | 30.2% | |

**Write each decimal as a percent.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 7. | 0.3 | | |  |  | | --- | --- | | 8. | 5.420 | | |  |  | | --- | --- | | 9. | 0.385 | |

**Write each fraction as a percent. Round to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 10. | |  | | --- | | 89 http://www.edhelperclipart.com/clipart/fractdiv3.gif 100 | | | |  |  |  | | --- | --- | --- | | 11. | |  | | --- | | 21 http://www.edhelperclipart.com/clipart/fractdiv2.gif 5 | | | |  |  |  | | --- | --- | --- | | 12. | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2 | | | |  |  |  | | --- | --- | --- | | 13. | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 5 | | |

**Write each fraction as a percent. Round to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 14. | |  | | --- | | 15 http://www.edhelperclipart.com/clipart/fractdiv2.gif 16 | | | |  |  |  | | --- | --- | --- | | 15. | |  | | --- | | 5 http://www.edhelperclipart.com/clipart/fractdiv1.gif 6 | | | |  |  |  | | --- | --- | --- | | 16. | |  | | --- | | 63 http://www.edhelperclipart.com/clipart/fractdiv2.gif 10 | | | |  |  |  | | --- | --- | --- | | 17. | |  | | --- | | 3 http://www.edhelperclipart.com/clipart/fractdiv1.gif 4 | | |

**Complete. Numbers are rounded to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 18. | |  |  |  | | --- | --- | --- | | percent |  | 560% | | fraction |  | \_\_\_\_\_\_\_\_ | | | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 19. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 5 | | | percent |  | \_\_\_\_\_\_\_\_ | | | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 20. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 7 http://www.edhelperclipart.com/clipart/fractdiv1.gif 8 | | | decimal |  | \_\_\_\_\_\_\_\_ | | |

**Complete. Numbers are rounded to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 21. | |  |  |  | | --- | --- | --- | | fraction |  | \_\_\_\_\_\_\_\_ | | decimal |  | \_\_\_\_\_\_\_\_ | | percent |  | 39% | | | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 22. | |  |  |  | | --- | --- | --- | | fraction |  | \_\_\_\_\_\_\_\_ | | decimal |  | 0.7 | | percent |  | 70% | | | |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 23. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2 | | | decimal |  | \_\_\_\_\_\_\_\_ | | percent |  | \_\_\_\_\_\_\_\_ | | |

**Find the percent of each number.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 24. | 89% of 47 | | |  |  | | --- | --- | | 25. | 232% of 132 | | |  |  | | --- | --- | | 26. | 20% of 130 | |

**Complete. Round your answer to the nearest tenth.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 27. | 110% of 8038 is what number? | | |  |  | | --- | --- | | 28. | 90% of what number is 414? | |

**Find each percent of change. Round your answer to the nearest tenth of a percent.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 29. | 220 is increased to 286 | | |  |  | | --- | --- | | 30. | 270 is decreased to 216 | |

**Fill in the missing value. Assume simple interest.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 31. | |  |  |  | | --- | --- | --- | | principal |  | \_\_\_\_\_\_\_\_ | | interest rate |  | 13% | | time |  | 3 years | | simple interest |  | $35,067.24 | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 32. | |  |  |  | | --- | --- | --- | | principal |  | $16,411 | | interest rate |  | 5% | | time |  | \_\_\_\_\_\_\_\_ | | simple interest |  | $1,641.10 | | |

**Fill in the missing value. Assume simple interest.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 33. | |  |  |  | | --- | --- | --- | | principal |  | \_\_\_\_\_\_\_\_ | | interest rate |  | 10.48% | | time |  | 58 months | | simple interest |  | $49,045.09 | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 34. | |  |  |  | | --- | --- | --- | | principal |  | $952,066 | | interest rate |  | 11.11% | | time |  | \_\_\_\_\_\_\_\_ | | simple interest |  | $149,847.25 | | |

**Complete.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 35. | Scientists estimate that the average annual temperature in Bigtown has increased by two and six tenths percent over the past century. If the current average annual temperature in Bigtown is 15.4http://www.edhelper.com/clipart/degrees.jpgC, what must the average temperature have been 100 years ago? Round your answer to the nearest hundredth of a degree. | | |  |  | | --- | --- | | 36. | Nicole's mother is a nurse. She came to school to check our posture and our backs. She told us that about 4.9% of children have a problem called scoliosis. There are one hundred forty-five students in our school. If our school is like the average, how many children will have scoliosis? Express your answer to the nearest whole number. | |

|  |
| --- |
| **Answer Key 0757543** |

|  |
| --- |
| **Write each percent as a fraction in simplest form.** |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 1. | 41%   |  | | --- | | **41 http://www.edhelperclipart.com/clipart/fractdiv3.gif 100** | | | |  |  |  | | --- | --- | --- | | 2. | 980%   |  | | --- | | **49 http://www.edhelperclipart.com/clipart/fractdiv2.gif 5** | | | |  |  |  | | --- | --- | --- | | 3. | 50%   |  | | --- | | **1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2** | | |

**Write each percent as a decimal.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 4. | 19%  **0.19** | | |  |  | | --- | --- | | 5. | 84.8%  **0.848** | | |  |  | | --- | --- | | 6. | 30.2%  **0.302** | |

**Write each decimal as a percent.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 7. | 0.3  **30%** | | |  |  | | --- | --- | | 8. | 5.420  **542%** | | |  |  | | --- | --- | | 9. | 0.385  **38.5%** | |

|  |
| --- |
| **Answer Key 0757543** |

|  |
| --- |
| **Write each fraction as a percent. Round to the nearest hundredth of a percent.** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 10. | |  | | --- | | 89 http://www.edhelperclipart.com/clipart/fractdiv3.gif 100 |   **89%** | | |  |  |  | | --- | --- | --- | | 11. | |  | | --- | | 21 http://www.edhelperclipart.com/clipart/fractdiv2.gif 5 |   **420%** | | |  |  |  | | --- | --- | --- | | 12. | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2 |   **50%** | | |  |  |  | | --- | --- | --- | | 13. | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 5 |   **20%** | |

**Write each fraction as a percent. Round to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 14. | |  | | --- | | 15 http://www.edhelperclipart.com/clipart/fractdiv2.gif 16 |   **93.75%** | | |  |  |  | | --- | --- | --- | | 15. | |  | | --- | | 5 http://www.edhelperclipart.com/clipart/fractdiv1.gif 6 |   **83.33%** | | |  |  |  | | --- | --- | --- | | 16. | |  | | --- | | 63 http://www.edhelperclipart.com/clipart/fractdiv2.gif 10 |   **630%** | | |  |  |  | | --- | --- | --- | | 17. | |  | | --- | | 3 http://www.edhelperclipart.com/clipart/fractdiv1.gif 4 |   **75%** | |

**Complete. Numbers are rounded to the nearest hundredth of a percent.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 18. | |  |  |  | | --- | --- | --- | | percent |  | 560% | | fraction |  | \_\_\_\_\_\_\_\_ |  |  | | --- | | **28 http://www.edhelperclipart.com/clipart/fractdiv2.gif 5** | | | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 19. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 5 | | | percent |  | \_\_\_\_\_\_\_\_ |   **20%** | | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 20. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 7 http://www.edhelperclipart.com/clipart/fractdiv1.gif 8 | | | decimal |  | \_\_\_\_\_\_\_\_ |   **0.88** | |

|  |
| --- |
| **Answer Key 0757543** |

|  |
| --- |
| **Complete. Numbers are rounded to the nearest hundredth of a percent.** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 21. | |  |  |  | | --- | --- | --- | | fraction |  | \_\_\_\_\_\_\_\_ | | decimal |  | \_\_\_\_\_\_\_\_ | | percent |  | 39% |  |  |  |  |  | | --- | --- | --- | --- | | **fraction** |  | |  | | --- | | **39 http://www.edhelperclipart.com/clipart/fractdiv3.gif 100** | | | **decimal** |  | **0.39** | | **percent** |  | **39%** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 22. | |  |  |  | | --- | --- | --- | | fraction |  | \_\_\_\_\_\_\_\_ | | decimal |  | 0.7 | | percent |  | 70% |  |  |  |  |  | | --- | --- | --- | --- | | **fraction** |  | |  | | --- | | **7 http://www.edhelperclipart.com/clipart/fractdiv2.gif 10** | | | **decimal** |  | **0.7** | | **percent** |  | **70%** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 23. | |  |  |  |  | | --- | --- | --- | --- | | fraction |  | |  | | --- | | 1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2 | | | decimal |  | \_\_\_\_\_\_\_\_ | | percent |  | \_\_\_\_\_\_\_\_ |  |  |  |  |  | | --- | --- | --- | --- | | **fraction** |  | |  | | --- | | **1 http://www.edhelperclipart.com/clipart/fractdiv1.gif 2** | | | **decimal** |  | **0.5** | | **percent** |  | **50%** | | |

**Find the percent of each number.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 24. | 89% of 47  **41.83** | | |  |  | | --- | --- | | 25. | 232% of 132  **306.24** | | |  |  | | --- | --- | | 26. | 20% of 130  **26** | |

**Complete. Round your answer to the nearest tenth.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 27. | 110% of 8038 is what number?  **8841.8** | | |  |  | | --- | --- | | 28. | 90% of what number is 414?  **460** | |

|  |
| --- |
| **Answer Key 0757543** |

|  |
| --- |
| **Find each percent of change. Round your answer to the nearest tenth of a percent.** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 29. | 220 is increased to 286  **30%** | | |  |  | | --- | --- | | 30. | 270 is decreased to 216  **20%** | |

**Fill in the missing value. Assume simple interest.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 31. | |  |  |  | | --- | --- | --- | | principal |  | \_\_\_\_\_\_\_\_ | | interest rate |  | 13% | | time |  | 3 years | | simple interest |  | $35,067.24 |  |  |  |  | | --- | --- | --- | | **principal** |  | **$89,916** | | **interest rate** |  | **13%** | | **time** |  | **3 years** | | **simple interest** |  | **$35,067.24** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 32. | |  |  |  | | --- | --- | --- | | principal |  | $16,411 | | interest rate |  | 5% | | time |  | \_\_\_\_\_\_\_\_ | | simple interest |  | $1,641.10 |  |  |  |  | | --- | --- | --- | | **principal** |  | **$16,411** | | **interest rate** |  | **5%** | | **time** |  | **2 years** | | **simple interest** |  | **$1,641.10** | | |

**Fill in the missing value. Assume simple interest.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 33. | |  |  |  | | --- | --- | --- | | principal |  | \_\_\_\_\_\_\_\_ | | interest rate |  | 10.48% | | time |  | 58 months | | simple interest |  | $49,045.09 |  |  |  |  | | --- | --- | --- | | **principal** |  | **$96,825** | | **interest rate** |  | **10.48%** | | **time** |  | **58 months** | | **simple interest** |  | **$49,045.09** | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 34. | |  |  |  | | --- | --- | --- | | principal |  | $952,066 | | interest rate |  | 11.11% | | time |  | \_\_\_\_\_\_\_\_ | | simple interest |  | $149,847.25 |  |  |  |  | | --- | --- | --- | | **principal** |  | **$952,066** | | **interest rate** |  | **11.11%** | | **time** |  | **17 months** | | **simple interest** |  | **$149,847.25** | | |

|  |
| --- |
| **Answer Key 0757543** |

|  |
| --- |
| **Complete.** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | 35. | Scientists estimate that the average annual temperature in Bigtown has increased by two and six tenths percent over the past century. If the current average annual temperature in Bigtown is 15.4http://www.edhelper.com/clipart/degrees.jpgC, what must the average temperature have been 100 years ago? Round your answer to the nearest hundredth of a degree.   **15.01 degrees Celsius** | | |  |  | | --- | --- | | 36. | Nicole's mother is a nurse. She came to school to check our posture and our backs. She told us that about 4.9% of children have a problem called scoliosis. There are one hundred forty-five students in our school. If our school is like the average, how many children will have scoliosis? Express your answer to the nearest whole number.   **7 children** | |